AFIT/GTM/LAR/95S-7

MEASURING BEHAVIORS OF AIR FORCE OFFICERS AS INDICATORS OF EFFECTIVE PERFORMANCE AND LEADERSHIP

THESIS

Presented to the Faculty of the School of Logistics and Acquisition Management

Air Education and Training Command

In Partial Fulfillment of the Requirements for the Degree of

Master of Science in Logistics Management

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September 1995

Acknowledgments

There are many people I would like to thank for helping me in accomplishing this thesis. First and foremost, I would like to thank my thesis advisor, Lt. Col. James R. Van Scotter. His insight and guidance during the research effort were invaluable. I would especially like to thank him for developing the computer program that was used on my second survey. I would never have completed this project without his help.

Next, I would like to thank Dr. Guy Shane for all of his research expertise. He was extremely helpful when my SAS program and I were not getting along so well! He also served as a sounding board for all of my and Lt. Col. Van Scotter's ideas.

I would also like to thank all of my fellow transporters, as they had to suffer through all of my survey pre-tests as well as the actual surveys when they were completed. Similarly, I am grateful to all of the Executive Officers on Wright-Patterson AFB who helped me get a bunch of officers to take my surveys.

Finally, I would like to thank my husband, Don, who had to put up with me waiting to the last minute and then staying up all night to finish what I was doing. I would also like to thank him for never losing his patience with me when I asked him a ton of analysis questions—what does this mean again? I would never have kept sane without him.

Linda S. Hurry

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Abstract

It is clear that the officer corps will play a key role in improving the Air Force's efficiency, preserving its traditions, and ensuring it maintains the highest level of combat capability. Yet, surprisingly, there is little agreement about exactly which types of officer performance contribute the most to meeting the Air Force's objectives. Performance requirements for officers have not been defined in terms specific enough to guide training course development and performance evaluations. This study identified the types of performance behaviors Air Force supervisors view as most important for effective officership. It also tested a model of individual officer effectiveness which proposed that four distinct types of performance—leadership, task performance, interpersonal facilitation, and job dedication—each contribute independently and significantly to overall performance. Policy capturing analysis supported the model. The analysis also showed rated officers, engineers/analysts, and support officers agree about the relative importance of leadership, task performance, interpersonal facilitation, and job dedication regardless of their AF job category. Results also showed that commissioning source, race, and sex of the rater do not influence the rating policies, but the grade of the officer does. Implications for Air Force commissioning-source training programs are discussed.

MEASURING BEHAVIORS OF AIR FORCE OFFICERS AS INDICATORS OF EFFECTIVE PERFORMANCE AND LEADERSHIP

I. Introduction

Problem Statement

Air Force leaders are working hard to reorganize the service's force structure, improve operations, make better use of resources, and improve effectiveness in meeting present and future mission requirements. The officer corps plays a key role in this process. Officers shoulder much of the responsibility for day-to-day management and long term planning. Therefore, it is somewhat surprising that no one has defined exactly what types of performance contribute the most to an officer's individual effectiveness and support of the USAF mission.

New officers learn about officer effectiveness from informal feedback from supervisors and peers and from three types of formal sources. The pre-commissioning programs at the US Air Force Academy (USAFA), Reserve Officer Training Corps (ROTC), and Officer Training School (OTS) provide the initial training officers need to perform effectively in the Air Force. Students receive instruction on specific communication skills, leadership, and managerial practices expected to be important in their Air Force roles (Air Command and Staff College, 1988:10). The second source of officer development is the Air

Force's Professional Military Education (PME) program, which includes the Lieutenants' Professional Development Program, Squadron Officer School, Air Command and Staff College, and Air War College. These PME courses build upon the knowledge and skills obtained in previous training programs and job experience (Department of the Air Force, 1989:9). Each level of PME focuses on a specific set of skills and knowledge appropriate for their students' position in the USAF leadership structure. The third way officers learn about individual effectiveness is through the Officer Evaluation System. Officer Performance Reports and feedback sessions are designed to accurately appraise performance and provide officers with the information they need to become more effective (Department of the Air Force, 1988:3-5).

Recently, the three commissioning sources have begun to re-analyze their key processes, programs, and customer requirements. These efforts are designed to ensure graduates have the specific knowledge, skills, and abilities needed for effective performance in the Air Force. Unfortunately, there is little empirical evidence describing the set of knowledge, skills, and behaviors required for effective performance (Leber, 1994b; Rose, 1995; and Nath, 1995). My study addresses these issues by proposing and testing a comprehensive definition of junior officer performance to help guide the Academy, ROTC, and OTS's efforts.

Research Objectives

The primary objective of this study is to assist the Air Force's three commissioning programs determine the specific types of knowledge, skills, and behaviors that contribute the most to the overall performance of junior officers and support of the Air Force mission. Because an officer's overall effectiveness is the result of his or her performance in a variety of situations over time, the study uses the policy-capturing methodology to determine which job-related behaviors supervisors and commanders judge as contributing the most to the performance of junior officers (Slovic and Lichtenstein, 1977:650). Policy capturing is a statistical method that reveals how much decision-makers weigh various attributes in reaching overall decisions. It provides direct information about how supervisors combine information to make overall decisions (Orr, Sackett, and Mercer, 1989:34).

Recent literature suggests a model of individual officer effectiveness which is based on behaviors in four performance domains—leadership, task performance and two types of contextual performance—interpersonal facilitation and job dedication (Van Scotter, 1994; Motowidlo and Van Scotter, 1994; Borman and Motowidlo, 1993; and Air Command and Staff College, 1988). Leadership is defined as the unique ability to influence subordinates' behavior in ways that benefit the organization. Task performance is the proficiency or skill with which an individual carries out the technical or specialized activities in his or her job (Van Scotter, 1994:21). Interpersonal facilitation is "the extent to which a worker helps others contribute to their effective task performance or

helps maintain a social and psychological climate that facilitates accomplishment of the organizations' goals" (Van Scotter, 1994:21). Job dedication includes volitional, motivated behaviors that contribute to individual effectiveness. These behaviors support individual and organizational goals through compliance with formal and informal rules, personal discipline and responsibility, hard work, persistent effort, and initiative (Van Scotter, 1994:24). Although research has provided evidence that these elements of performance are important in a variety of jobs (Van Scotter, 1994), no one knows precisely which behaviors within each performance category are most important for junior officers. Therefore, one objective of this study is to determine which behaviors are most important in each of the four categories.

A second objective of this study is to test the relationships between leadership, task performance, interpersonal facilitation, job dedication, and the criterion of overall junior officer effectiveness. This portion of the study will examine the way supervisors combine information to make overall performance assessments. Therefore, the study will test the relationships among the four performance factors and their influence on supervisors' overall performance rating policies. This information should help the activities involved in junior officer PME focus their efforts on training candidates in the most highly valued areas.

Because Air Force officers work in many occupational and professional areas and differ in their experience and background, the third objective is to determine whether or not the pattern of job-related behaviors considered

important for effective junior officer performance is common throughout the Air Force or differs among groups. The study will examine the influence of grade, commissioning source, age, race, or gender of the supervisor on performance category weights and consistency. For example, one would expect field grade officers to be more consistent than company grade officers in their decisions about what behaviors are most important for junior officer effectiveness. On the other hand, because of the Air Force's Social Actions Program and policy of equal opportunity and treatment of personnel, one would not expect gender or race to affect supervisors' decisions about the importance of particular behaviors (Air Command and Staff College, 1988:67).

Meeting this objective also involves testing for differences in job-related behaviors considered important for effective officership in various officer job categories. For the purpose of this study, I identified three main officer job categories: rated officers, support officers/managers, and analysts/engineers. These categories were selected for three reasons: 1) most new Second Lieutenants are assigned to one of these categories (Thomas, 1994), 2) the types of jobs performed by officers in these categories differ significantly, and 3) because of the nature of the jobs, the types of behavior which contribute the most to effective performance in one category may differ from the types of behavior most important for another category. Therefore, this study will test the importance of task performance, interpersonal facilitation, job dedication, and leadership behaviors for groups of officers based on their occupational category, experience, commissioning source, race, and gender.

Finding that diverse groups weigh performance information in a consistent way would support the use of a single general curriculum for officer training. Significant differences in how effective performance is defined across the occupational areas would indicate the need to develop more specialized training, targeting the skills and knowledge needed in specific areas. Finally, finding large differences in the way members of different racial groups, genders, or experience levels weigh various types of performance might indicate the need to modify training programs in other ways.

II. Literature Review

This study proposes that an Air Force officer's overall performance rating can be explained in terms of an individual's behavior in four areas—leadership, task performance, interpersonal facilitation, and job dedication. Before presenting the proposed model of officer effectiveness, it is necessary to provide some background information.

Individual Effectiveness

Individual effectiveness is an all-encompassing concept that subsumes performance, productivity, and efficiency (Schmitt and Klimoski, 1991:159). Performance is defined as behaviors that are under an individual's control and are relevant to one's organizational goals (Van Scotter, 1994: 4). In general, overall effective performance can be defined as behaviors which meet organizational expectations and are comparable with coworkers' performance. Individuals with low overall performance are less effective than their peers, fail to meet performance standards, and detract from the organization's ability to achieve its goals. On the other hand, high performers are more effective than their counterparts, consistently exceed performance standards, and make significant contributions to the organization (Van Scotter, 1994:18-19).

Three Assessment Alternatives

Campbell, Dunnette, Lawler, and Weick described three approaches toward assessing the effectiveness of individuals. They suggested that

assessments of individual effectiveness could be based either on the person, the process, or the product (1970:175). The US Air Force Academy recently used two of these options when they surveyed operational personnel to determine requirements for junior officers.

The first study identified key characteristics, traits, or qualities needed in junior officers; it was based on the person approach. During this study, the Academy's Office of Quality and Assessments interviewed 133 supervisors to determine the personal traits or qualities that effective junior officers "must possess." The study indicated effective junior officers must exhibit integrity/ethics; commitment/ dedication/motivation; honesty; dependability/trustworthiness; positive attitude/ enthusiasm; responsibility for their actions; respect; loyalty; initiative/inquisitive; professional image/military bearing; and communication skills (Leber, 1994a).

These trait-based assessments are based on the premise that successful leaders possess certain unique qualities that make them stand out from other people. Although it is clear that certain traits contribute to a leader's success, accurately assessing traits is very difficult, even for trained psychologists (Kirkpatrick and Locke, 1991:501). Traits are neither easily defined, nor tangible enough to be observed; therefore, traits have to be inferred from what people do or say (Schmitt and Klimoski, 1991:175). Unfortunately, traits alone are not sufficient for successful leadership—they are simply a precondition. Leaders with the requisite traits must still take certain actions in order to be successful; possessing the appropriate traits only makes it more likely that such actions will

be taken and be successful. Evidence suggests that traits are mostly inherited and are only partly influenced by situational or environmental factors (Kirkpatrick and Locke, 1991:501). As a result, identifying key traits of leaders does not provide much information that would assist in curriculum development or improvement in the training programs at the Academy, ROTC, or OTS.

Another method of assessing individual effectiveness deals with "the product," which refers to items that were accomplished or produced as part of one's job (Kirkpatrick and Locke, 1991:501). The Academy's second study used this approach. It identified the specific aspects of military knowledge and management skills junior officers needed to effectively accomplish their jobs. Researchers found that knowledge about the enlisted force, standards of conduct, written and verbal communication, and counseling were important (Thomas, 1994:6-12). This study described several types of information the graduates need to know; but did not provide any clear links between them and effective mission performance. Like traits, knowledge does not guarantee graduates will act in the desired ways. Knowledge provides the means to perform, but it differs from actual performance.

The third method of assessing individual effectiveness is the “process” approach (Campbell et al., 1970:175). It focuses on job-related behaviors (what a person actually does on the job) rather than a worker’s personal qualities or knowledge. This method has several advantages over the other alternatives. The first advantage is that behavior is observable—it can be seen and recorded with some degree of reliability. Secondly, behavior is something that is directly

related to organizational outcomes and is something for which an individual can be held accountable. Third, much of behavior is learned. Therefore, it can be modified through the kind of education and training provided in the pre-commissioning training programs (Kirkpatrick and Locke, 1991:501).

These advantages convinced me that the process approach would be the most useful in evaluating the effectiveness of junior Air Force officers. The first step in applying the process approach was to develop a model of individual officer effectiveness based on previous research on individual performance. The most relevant sources were the portions of the performance modeling and performance appraisal literature that are summarized in the following sections.

Performance Dimensions

Effective organizational functioning often requires employees to perform in ways that go beyond the specific task requirements of their jobs (Van Scotter, 1994:88). For example, contextual behaviors such as working hard, persisting, taking initiative, and paying attention to details are fundamental aspects of performance that differ from task performance. Despite their contribution to the effectiveness of an organization, these behaviors are usually not included in lists of individuals' formal responsibilities and obligations to the organization (Borman and Motowidlo, 1993:75). Some of them are general requirements that apply to all organizational members. Others reflect individual differences in interest and motivation.

Borman and Motowidlo proposed a theoretical framework for distinguishing between task and contextual performance behaviors. They defined task performance as the effectiveness with which an individual carries out the technical or specialized activities that define his or her job. Contextual performance, on the other hand, does not support the "technical core itself as much as it supports the organizational, social, and psychological environment in which the technical core must function" (Borman and Motowidlo, 1993:73). They argued that workers can either help or hinder efforts to accomplish organizational goals by performing in ways that are not directly related to their main task functions. These actions "shape the organizational, social, and psychological context that serves as the critical catalyst for task activities and processes" (Borman and Motowidlo, 1993:71). They contribute to organizational effectiveness by making one's own task performance more effective, making a coworker's task performance more effective, or by "supporting and maintaining an organizational environment that favors accomplishment of goals" (Van Scotter, 1994:4-5).

Motowidlo and Van Scotter provided empirical evidence that task and contextual performance could be distinguished from each other, and that each explained separate portions of variance in overall performance. In multiple regression analysis, the factors explained over 29 percent of the variance in overall supervisory performance ratings ($R = .54$, $p < .01$, $N = 421$). Beta weights in the regression equation were .37 ($p < .01$) for task performance and .33 ($p < .01$) for contextual performance, indicating the factors were "uniquely and

significantly associated with overall performance" (Motowidlo and Van Scotter, 1994:479).

Recent research in organizational citizenship behavior (Smith, Organ, and Near: 1983), prosocial organizational behavior (Brief and Motowidlo, 1986), military performance research, and criterion development efforts within the Army's Project A (Borman and Motowidlo, 1993:75) have highlighted similar patterns of behavior. For example, the Organizational Adaptation Paradigm (OAP) described a construct similar to the task/contextual performance domain. In the OAP, Borman and Motowidlo argued that effective organizational performance was a function of the members performing their jobs, "fitting into the organization's culture, responding appropriately to supervisor's initiatives, getting along well with other organizational members, and generally doing what the organization needs" (Borman and Motowidlo, 1993:89).

Project A, a large-scale project designed to improve selection and placement systems for entry-level jobs in the US Army (Campbell and Zook, 1990), provides evidence that a variety of behavioral dimensions are required for effective performance in some settings. In this study, researchers developed a conceptual model of soldier effectiveness based on the literature on organizational commitment, organizational socialization, motivation, job satisfaction, and morale in the US Army (Borman et al., 1987:1).

> We sought to define a set of criterion behaviors that would include elements of soldier effectiveness not directly related to task performance but related instead to a broader conception of job performance. The notion here was that being a good soldier from the Army's perspective means more than just performing the job in

> a technically proficient manner. It also means performing a variety of other activities that contribute to a soldiers' effectiveness in the unit and to his or her overall worth to the Army. (Borman and Motowidlo, 1993:78)

The model portrayed soldier effectiveness as a range of leadership, discipline, and occupationally specific dimensions. Soldier effectiveness was also defined in part by general “army-wide” skills that underlie effectiveness in soldiers regardless of what the individual’s particular job might be. "Contextual activities are common to most jobs, their peripheral details vary because they are performed in environments that change from job to job, but their central features are the same" (Borman et al., 1987:12). Volunteering, persisting, helping, cooperating, following rules, staying with the organization, and endorsing its objectives are important for almost all jobs (Borman and Motowidlo, 1993:74). Later research enlarged the scope of contextual performance behaviors and measured contextual performance dimensions separately so their individual contributions could be clarified (Van Scotter, 1994:7).

Three Factor Performance Model

Research by Van Scotter (1994) supports the need to sub-divide the contextual performance domain into interpersonal facilitation and job dedication. He defined interpersonal facilitation as "the extent to which a worker helps others, contributes to their effective task performance, or helps maintain a social and psychological climate that facilitates accomplishment of the organizations’ goals" (Van Scotter, 1994:21). Job dedication was defined as volitional, motivated behaviors that contribute to individual effectiveness. "Job dedication

supports individual and organizational goals through conformance with formal and informal rules, personal discipline and responsibility, hard work, persistent effort, and initiative" (Van Scotter, 1994: 24). Research by Katz and Kahn (1978); Smith et al.(1983); Brief and Motowidlo (1986); Motowidlo et al. (1986); Day and Silverman (1989); Campbell and Zook (1991); Borman and Motowidlo (1993); and Van Scotter (1994) provide logical and empirical evidence that combining the types of behaviors within interpersonal facilitation with those encompassed by job dedication into a single overall measure of “contextual performance” might obscure information needed for assessing individual effectiveness.

Katz and Kahn provided early insight into the importance of organizations going beyond formal role prescriptions and placing an emphasis on spontaneous, cooperative, helpful, and altruistic behaviors. They distinguished task performance from "innovative and spontaneous behavior" which included "cooperative gestures, actions protecting the organization, and behavior that enhances the external image of the organizations" (Katz and Kahn, 1978:75-76). These contextual behaviors can be divided into two general categories: behaviors relating to the organization and behaviors relating to other individuals.

Similarly, Smith et al. (1983) and Bateman and Organ (1983) described organizational citizenship behaviors as discretionary behaviors that help organizational members perform their jobs or show support for the organization. Smith et al. administered a sixteen-item questionnaire (containing statements such as "Volunteers for things that are not required" and "Takes undeserved

breaks") in which raters indicated how characteristic each statement was of a subordinate. Factor analysis indicated that two factors described individuals' performance in organizational citizenship. The first factor was altruism—a "spontaneous prosocial gesture towards others in the organization such as orienting new people and helping coworkers or supervisors with their work." The second factor was conscientiousness—a "generalized compliance with organizational rules and procedures, such as being on time to work and not spending time on personal phone calls" (Smith et al., 1983: 454). The first factor was characterized as citizenship behavior toward individuals, and the second was characterized as citizenship behavior related to the organization.

Motowidlo, Packard, and Manning (1986) derived two similar dimensions of effective individual performance in a study investigating the effects of stress on nurses' performance—interpersonal effectiveness and cognitive/motivational effectiveness. Items describing concentration, composure, perseverance, and adaptability had high loadings on the cognitive/motivational effectiveness factor. On the other hand, items such as personal warmth, morale, teamwork and cooperation, and sensitivity to patients had high factor loadings on the interpersonal dimension. Day and Silverman (1989) also provided support for splitting the contextual performance domain. They reported "interpersonal orientation (measured by a personality composite) correlated .21 with supervisor ratings of work ethic (willingness to work long hours to complete tasks), but .42 with cooperation" (Day and Silverman, 1989: 35). Because the differences in these correlations are significant ($p<.05$), Day and Silverman's model provided

statistical evidence suggesting that combining the work effort criterion and cooperation criterion into a single performance measure would obscure information meaningful in personnel selection (Van Scotter, 1994:15).

US Army Selection and Classification Study (Project A) researchers also found multiple performance factors. Analysis showed the dimensions of effort and leadership, maintaining personal discipline, and military bearing and physical fitness were useful in evaluating individual performance across nine entry-level army occupations (Campbell and Zook, 1991:135). The first factor, the effort and leadership dimension, consisted of effort, perseverance, dependability, willingness to work and cooperate, and support of other soldiers. The second factor, personal discipline, was described in terms of "adherence to service regulations and traditions, integrity, and self control" (Campbell and Zook, 1991:135). The final factor, military bearing and physical fitness, was defined as organizationally required elements of performance and was associated with volition, conscientiousness, and compliance (Campbell and Zook, 1991:136).

Van Scotter investigated the usefulness of distinguishing between task performance and two categories of contextual performance, interpersonal facilitation and job dedication. He determined that task performance, interpersonal facilitation, and job dedication were different from each other and that individually each contributed to the organizational effectiveness of Air Force maintenance technicians (Van Scotter, 1994:86).

Leadership

The Air Force defines leadership as the art of influencing and directing people to accomplish the mission (Air Command and Staff College, 1988:1). This definition highlights two fundamental elements of leadership—mission and people. To some degree, everything an Air Force member does affects both elements. Experienced leaders recognize that these elements go hand-in-hand.

Table 1. Leadership Behaviors

- Behaving consistently [1,4,6]
- Assigning subordinates duties and responsibilities appropriate for their abilities [1,5,6]
- Guiding and directing subordinates effectively [5]
- Using good judgment [2]
- Recognizing and encouraging effective performance [1,4,6]
- Stimulating effective cooperation among others [2,6]
- Reconciling conflicting organizational demands [4.6]
- Maintaining high visibility both on and off the job [4]
- Supporting subordinates [1,2,3,4,5,6]
- Ensuring deadlines and performance standards are met [5]
- Representing the group effectively [1]
- Speaking effectively [4]
- Avoiding trespassing on pre-delegated responsibility areas [4]
- Making tough decisions quickly [2]
- Providing appropriate feedback to subordinates [1,2,3,4,5,6]
- Reacting confidently when the unexpected occurs [2,3]
- Taking a position on controversial issues [1,3]
- Working to create an effective organizational atmosphere [3,6]
- Persuading others both inside and outside the organization [3,6]
- Resolving conflicts between members of the organization [4,6]
- Coordinating subordinates' efforts to minimize conflicts [2,4,6]
- Monitoring the status of work in progress [2]

Sources:

[1]Bausum (1986), [2]Borman and Motowidlo (1983), [3]Air Command and Staff College (1988), [4]Conger et al. (1989), [5]Van Scotter and Shane (1995), and [6]Borman and Brush (1993).

The most successful leaders work hard to maintain just the right balance between the two. While Air Force members value leadership as a concept, determining exactly what makes a leader effective is more difficult. Recent research provides some clues. Bausum (1986), Borman and Motowidlo (1983), Air Command and Staff College (1988), Conger et al. (1989), Borman and Brush (1993), and Van Scotter and Shane (1995) each developed lists of effective leader behaviors. The leadership behaviors most relevant for junior officers are found in Table 1.

Task Performance

Borman defines task performance as the proficiency with which an individual performs activities that are formally recognized as the technical or specialized activities that define his or her job (Borman and Motowidlo, 1993:73). Task performance behaviors contribute directly and indirectly to the organization's technical core processes and to the production of goods or services through proficient and effective behaviors (Van Scotter, 1994:23). The list of task performance behaviors contained in Table 2 were distilled from the literature.

Campbell et al. (1990) maintained that the emphasis in task performance is proficiency (knowledge about task processes and how to carry them out efficiently) because jobs are defined in terms of organizational requirements, which specify the level and type of task proficiency necessary. Task requirements also reflect a level of expertise or specialization that may set one

worker apart from other organizational members. For example, a surgeon's expertise differentiates him or her from other hospital personnel. Similarly, an airline pilot's skills differ from those of ground personnel, and engineers' specialized skills differentiate them from assembly-line workers or general managers.

Table 2. Task Performance Behaviors

- Performing routine tasks efficiently [1,2,3]
- Solving urgent, unexpected problems expertly [2]
- Using equipment, tools, computers, etc. proficiently [1,3]
- Performing specialized tasks skillfully [1,2,3]
- Writing clearly and concisely [1,3]
- Operating Equipment [1]
- Providing others with current technical information [2,3]
- Prioritizing work tasks efficiently [1,2,3]
- Anticipating potential problems [2,3]
- Communicating task information effectively [1,3]
- Planning and organizing work [1,2,3]
- Troubleshooting expertly [2,3]
- Collecting and accurately interpreting information [1,2,3]
- Keeping up with the newest technology [1,2,3]
- Performing safely [1,2]
- Using technical expertise to meet real world needs [1,2]
- Providing expert technical advice to others [1,2,3]
- Using technical material effectively [1,2,3]
- Solving technical problems expertly [1,2,3]
- Accomplishing job tasks expertly [1,2,3]

Sources:
[1]Department of the Air Force (1988), [2]Van Scotter (1994:20-24), and [3]Borman and Brush (1993).

Interpersonal Facilitation

Interpersonal facilitation is defined as the extent to which a worker supports other members of the organization through expressions of concern,

consideration, cooperative and helpful acts; contributes to co-workers' effective task performance; encourages others to perform in organizationally relevant ways; and helps to maintain a social and psychological climate that facilitates accomplishment of the organization's goals (Van Scotter, 1994:21-24). Behaviors illustrating interpersonal facilitation are presented in Table 3.

Table 3. Interpersonal Behaviors

- Supporting or encouraging a coworker [1,2]
- Talking to others before taking actions that affect them [1,2]
- Treating others fairly [2]
- Helping someone without being asked [1,2,3]
- Developing and maintaining good working relationships [2,4]
- Displaying concern for others [3,4]
- Coordinating actions with others [1,4]
- Showing respect for others [2,3,4]
- Encouraging coworkers to stick together in hard times [1]
- Cooperating with others in the team effectively [1,2]
- Displaying a cheerful, confident outlook 2,[3]
- Considering others needs before acting [1,2]
- Warning the boss about an upcoming situation [2]
- Offering to help others do their work [1,2,3]
- Voluntarily pitching in to help the group [1,2]
- Lending a hand when a coworker needs it [1,2,3]
- Praising coworkers when they are successful [2]
- Listening to others ideas about getting work done [1,2]
- Give coworkers advice about how to do their jobs [1,2]

Sources:

[1]Borman and Motowidlo (1983), [2]Van Scotter (1994), [3]Van Scotter and Shane (1995), and [4]Borman and Brush (1993).

Researchers have described many similar behaviors. For example, Organ (1988) introduced the concept of courtesy as a set of citizenship behaviors that are effective because they prevent problems rather than helping

with or alleviating existing problems. An individual who is courteous would forewarn the boss about an upcoming situation or event. The individual might also notify the secretary that an urgent task was upcoming. Interpersonal facilitation also encompasses a variety of prosocial and helpful behaviors that are compatible with the organizational citizenship dimension of altruism.

Individuals with poor interpersonal performance will tend to display a negative attitude; refuse to help or cooperate with others; act in an inconsiderate manner; speak loudly at inappropriate times; complain about coworkers, supervisors, or subordinates publicly; "disagree vocally, act aggressively, or pick fights; tell lies or spread rumors about others; manipulate others; compete with coworkers; act selfishly; avoid associating with coworkers during breaks; and complain about working conditions." Behaviors such as these will decrease the organization's overall performance because they "detract from the interpersonal climate at work and distract coworkers from the organizational responsibilities" (Van Scotter, 1994:21-22).

Job Dedication

Job dedication encompasses volitional, motivated behaviors that are driven by will, motivational orientations, and beliefs about the value of work. It "transcends job involvement and motivation to perform the specific tasks that comprise the job and connotes a sense of loyalty to the organization as a whole and a desire to fulfill more general role requirements that come with organizational membership" (Borman and Motowidlo, 1993:78). In general, self-

motivated, disciplined behaviors like working hard, attending to important details, and persisting to finish a difficult task clearly contribute to individual and organizational effectiveness (Van Scotter, 1994:2). Behaviors associated with job dedication are presented in Table 4.

Table 4. Job Dedication Behaviors

- Paying close attention to important details [1,2]
- Taking the initiative to solve a work problem [1,2]
- Overcoming obstacles to complete a task [2,4]
- Tackling a difficult work assignment enthusiastically [1,2,4]
- Striving to excel [2,3]
- Ensuring work is done right [2]
- Performing consistently and reliably [2,3]
- Persisting in the face of adversity [1,2,4]
- Complying with instructions even when supervision are not present [1,2]
- Volunteering for additional duties [1,2]
- Putting extra effort into a task [1,2,3,4]
- Exercising personal discipline and self-control [2,4]
- Giving-up personal time for the mission [2]
- Adapting to difficult conditions [2,4]
- Overcoming hardships [1,2,4]
- Showing respect for authority [2,4]
- Volunteering for a difficult assignment [2]
- Putting in extra hours to get work done on time [2,3]
- Defending the supervisors decisions [2]
- Displaying proper military appearance and bearing [1,2,4]
- Rendering proper military courtesy [1,2,4]
- Working hard [2,3]

Sources:
[1]Borman and Motowidlo (1983), [2]Van Scotter (1994), [3]Van Scotter and Shane (1995), and [4]Borman and Brush (1993).

Workers who perform poorly on this dimension avoid work, take extra breaks, take a long time transitioning between work assignments, come late to

work, miss work more than others, miss appointments or training sessions, refuse to work overtime, frequently break rules and work procedures, avoid difficult assignments, depend on others for help with complex or heavy work, rarely show any initiative, disregard supervisors' instructions, and do not accept responsibility for their actions. Generally, these individuals display less interest in work than others and are less likely to meet organizational dress or performance requirements (Van Scotter, 1994:22-23).

Four Factor Model of Performance

Previous literature and the Air Force's cultural emphasis on leadership suggest overall performance ratings reflect individual effectiveness in four areas. Since research indicates task performance, leadership, interpersonal facilitation, and job dedication are likely to account for separate, but significant portions of the variance in overall performance, the present study will test the model of effective performance that is presented in Figure 1.

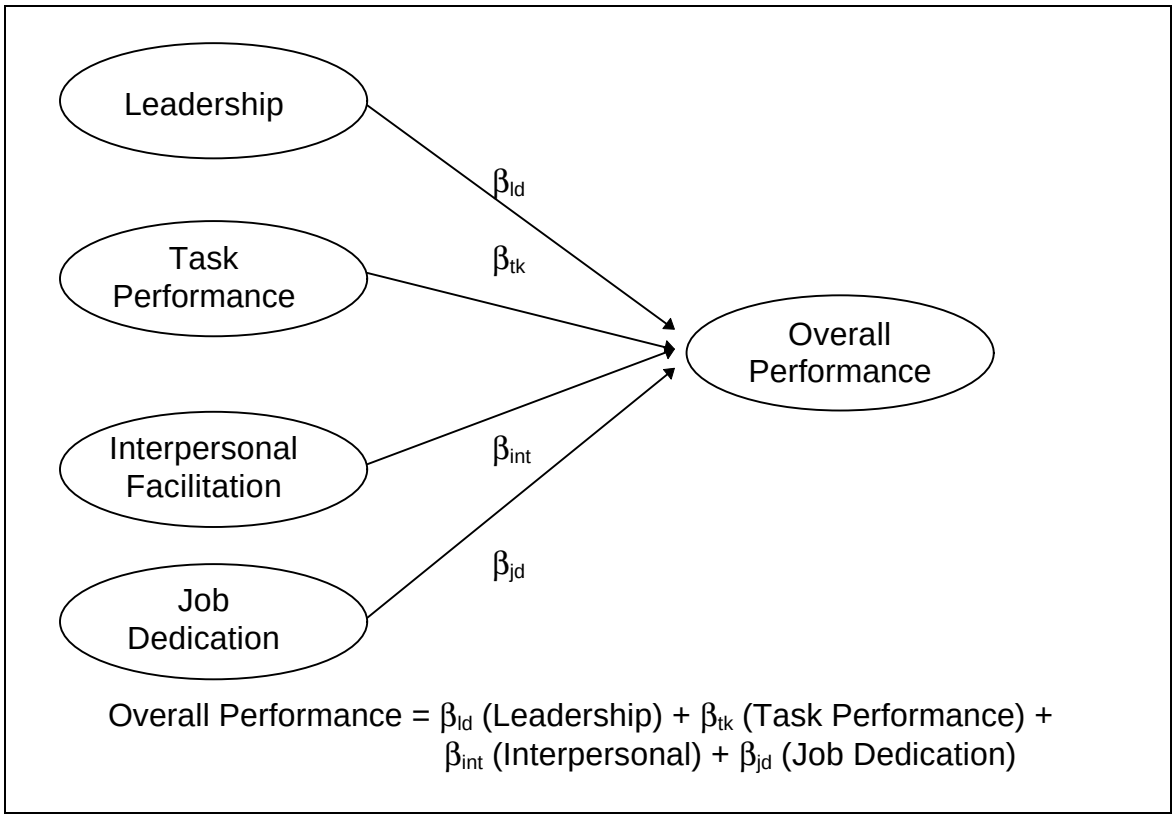

Figure 1. Four-Factor Model of Junior Officer Performance

The β_{ld}, β_{tk}, β_{int}, and β_{jd} in this equation represent the relative weights (or amount of importance) the supervisors place on a given performance category. Therefore, this model says that an individual's overall effectiveness is the sum of his or her performance in leadership, task performance, job dedication, and interpersonal facilitation multiplied by the weight their supervisor places on the particular category. The average weights for each category over a large sample of supervisors represent the organization's policy. However, if supervisors' views of performance vary greatly or the performance factors overlap too much, one or more of the factors may not be significantly different from zero. Thus, the model

provides a framework for determining which classes of behavior Air Force supervisors judge as most important for effective junior officer performance.

Officer Job Categories

For the purposes of this study, I identified three categories of officer occupations: rated officers, support officers, and analysts/ engineers. While all four performance domains should be important for each of job category, the task content, type and nature of interpersonal contacts, and nature of the responsibilities may vary substantially across these job categories. It also appears likely that these jobs would differ in their opportunities for leadership. Research suggests the behaviors representing interpersonal facilitation and job dedication should be common across jobs, but there may be differences in the importance of task performance and leadership across jobs.

Rated officers (i.e., pilots and navigators) constantly train to perform highly specialized missions involving aerial combat, ordinance delivery, in-flight refueling, cargo and passenger transportation, and special operations. Becoming qualified to fly/navigate and carry out the various USAF mission profiles takes years of training. Task scenarios are rehearsed over and over to ensure safety and proficiency. Junior officers are rarely assigned to leadership positions in these occupations; therefore, leadership would probably not be as important in overall performance of junior rated officers as it is for the other categories. Duties that might provide officers with an opportunity to display hard work, persistence, etc., are usually handled by non-flying personnel, such as the

squadron section commander. Therefore, job dedication may not play as large a role in a rated officer's overall performance as it does in other fields because it is hard for pilots to show extra effort, initiative, or persistence. Individual flying hours are limited by fiscal constraints, aircraft availability, and safety regulations. However, pilots and navigators often work with peers as a team to accomplish their mission, so interpersonal facilitation can be expected to play a part in their overall performance.

Support officers form the second category of officer jobs. They include the logisticians (transportation, supply, maintenance, and logistics plans officers), administrative/executive officers, personnel officers, etc. These officers typically receive very little technical training. Because they are often placed in supervisory or leadership positions early in their careers, leadership should contribute significantly to support officer effectiveness. Interpersonal facilitation should also be important for support officers because their jobs involve frequent contact with others at their own organizational level and above it. Job dedication should also be important because working hard, persisting, following rules, and taking the initiative help them differentiate themselves from others and may also set a good example for subordinates. Task performance, on the other hand, may be less important for junior support officers because they perform a wide variety of tasks that are not specialized in nature. Their main task is often to ensure subordinates perform technical jobs in maintenance, communication, etc., in a way that meets mission requirements.

Analysts/engineers make up the third job category for Air Force officers. This category includes operations research analysts, design engineers, civil engineers, and aeronautical engineers. These officers are highly trained in very specific areas. Because they are so specialized, task performance should be important in their performance. Many times these officers work in project teams so job dedication and interpersonal facilitation should be important for them. However, they usually have fewer opportunities to perform in leadership roles and may be more likely to work with peers than subordinates.

Rater Experience

Borman (1987) proposed that an individual's background and level of experience would likely affect one's judgment about performance. In a study to understand how supervisors define effective performance in Army officers, Borman found 25 personal work constructs clustered into six factors. He suggested that similarities in the rater's training and experience could explain part of their use of consistent categories (Borman, 1987:320). Similarly, in a study on Air Force officer performance, Van Scotter and Shane found differences in judgments of the importance of performance criterion items associated with job experience. They also reported "the source of entry-level training [commissioning source] also made a difference, but it is confounded here by a relationship with the experience variable" (Van Scotter and Shane 1995: 224). These findings suggest that the rater's source of commission and experience level are likely to explain differences in overall rating policies in this

study. In this study, field grade officers were designated as the high experience group and company grade officers comprised the low experience group. This distinction recognizes that experience and rank are highly correlated in the military. Because of their greater experience, field grade officers have wider responsibilities and authority.

Importance and Consistency Measures

Field research on performance ratings indicated policy capturing is useful and appropriate for examining the way raters combine information in making an overall rating (Hobson and Gibson, 1983: 640). Policy capturing is a general procedure that describes decision makers' information processing strategies statistically. It is often used to identify differences in the cues supervisors use when making ratings (Borman, 1991:297). This usage of goal of policy capturing is compatible with the objectives of this study—determining the extent to which leadership, task performance, job dedication, and interpersonal facilitation contribute to overall effectiveness.

Thus, policy capturing provides a way to model the relationships between leadership, task performance, interpersonal facilitation, and job dedication in supervisors' overall rating policies. The method uses regression analysis to develop a multiple linear regression equation to represent each rater's policy. The individual beta weights within the regression equation represent the amount of weight (importance) the supervisor places on each performance category. Mean standardized beta weights for the entire sample (of supervisors) represent

the relationships between the performance categories and the overall performance rating policies. The measure of consistency is the R^2 for each regression equation. The R^2 represents the degree of correspondence between the rater's policies (represented by the regression lines) and the weights assigned by the original group of experts. The mean R^2 represents the degree of similarity between rating policies and their expected values. Thus, R^2 is a measure of consistency in policy capturing analysis (Hobson and Gibson, 1983:647).

Objectives and Hypotheses

The study's objectives are to: (1) identify the types of performance behaviors USAF supervisors view as most important for junior officers; (2) test the relationships between leadership, task performance, interpersonal facilitation, job dedication, and supervisors' overall performance rating policies; and (3) determine whether or not the pattern of job-related behaviors considered important for junior officers changes with the rater's job category, experience level, grade, commissioning source, age, race, or gender. To achieve these objectives, the following research questions will be investigated:

Question 1. Which specific leadership, task performance, interpersonal facilitation, and job dedication behaviors are most important in accomplishing Air Force jobs?

Question 2. Do leadership, task performance, interpersonal facilitation, and job dedication behaviors each contribute significantly and independently to supervisors' judgments of overall effectiveness?

Hypothesis 1: Supervisors will use all four categories in making decisions about junior officer overall performance. Mean standardized beta weights for leadership, task performance, job dedication, and

interpersonal facilitation will each be significantly different from zero ($p < .05$) when the category scores are regressed with the overall performance judgments.

Question 3. Does the importance of task performance, interpersonal facilitation, leadership, and job dedication vary by officer job type?

Hypothesis 2: The importance of the four performance categories will vary by officer occupation.

Question 4: Do the patterns of job-related behaviors considered important in supervisors' rating policies vary with the supervisor's grade, race, sex, or commissioning source?

Hypothesis 3: The beta weights for the four categories field grade officers will differ from those of the company grade officers ($\beta_{\text{field grd}} \neq \beta_{\text{company grd}}$) across the leadership, task performance, interpersonal facilitation, and job dedication categories.

Hypothesis 4: The beta weights for the four performance categories will vary with the supervisor's race ($\beta_{\text{White}} \neq \beta_{\text{Non-White}}$).

Hypothesis 5: The beta weights for the four categories will vary with the supervisor's sex ($\beta_{\text{Male}} \neq \beta_{\text{Female}}$).

Hypothesis 6: The beta weights for the four performance categories will vary with the supervisor's commissioning source ($\beta_{\text{USAFA}} \neq \beta_{\text{ROTC}} \neq \beta_{\text{OTS}}$).

Question 5: Does the consistency of the captured rating policy vary with the supervisor's job category, grade, race, sex, or commissioning source?

Hypothesis 7: The consistency of the rating policy (R^2) will differ between job categories ($R^2_{\text{support}} \neq R^2_{\text{rated}} \neq R^2_{\text{analysts}}$).

Hypothesis 8: The consistency of the rating policies of the field grade officers will differ from the company grade officer's ($R^2_{\text{field grd}} \neq R^2_{\text{company grd}}$).

Hypothesis 9: The race of the supervisor will affect the consistency of the individual's rating policy ($R^2_{\text{white}} \neq R^2_{\text{nonwhite}}$).

Hypothesis 10: The gender of the rater will affect the consistency of the individual's rating policy ($R^2_{\text{male}} \neq R^2_{\text{female}}$).

Hypothesis 11: The commissioning source of the rater will affect the consistency of the individual's rating policy ($R^2_{USAFA} \neq R^2_{ROTC} \neq R^2_{OTS}$).

The results of this study will provide information to help the Academy, ROTC, and OTS assess the junior officer performance requirements. Specifically, the results should assist the commissioning programs in maintaining the traditions of relevance to the mission and professional excellence.

III. Method

Research suggests officer overall performance ratings should be able to be explained in terms of behavior in four particular areas—leadership, task performance, interpersonal facilitation, and job dedication. These constructs have been shown to account for significant portions of the variance in overall performance in other groups of personnel. However, the extent to which they apply to junior officer performance has not been determined.

Hobson and Gibson (1983) stated that the first step in policy capturing was to target a specific group of incumbents and then determine the important elements of performance for that group. In this study, supervisors rated the importance of the behaviors listed in Tables 1-4 compared with others from the same category. These importance ratings established the within-category "value" of the performance items.

After this has been accomplished, the policy capturing process involves: (1) presenting raters with profiles describing a hypothetical worker's performance on two or more dimensions of performance; (2) having raters review the profiles and rate the value of the overall performance reflected by the combined dimensions; (3) performing multiple regression analysis to compute each rater's policy; and (4) combining rating information to determine the relative importance of each of the factors in the organization (Hobson and Gibson, 1983: 640). The regression equations obtained this way provide statistical evidence

about how each rater "combines and weights dimensional information in arriving at the overall ratings" (Hobson and Gibson, 1983: 640).

This chapter describes the development of rating profiles based on the four-factor model of performance and subsequent analysis of supervisors' judgments about effective junior officer performance.

Survey #1

An initial survey was developed to obtain supervisory feedback on the importance of various behaviors for effective officer performance.

Sample and Procedure. A total of 84 Air Force officers voluntarily participated in this phase of the study by rating the importance of items from four performance domains. Individual responses were completely confidential. Eleven of the survey respondents were women and 73 were men. The average respondent was 34 years old, with 11 years in the military, and 6.5 years experience in supervising junior officers. Five Lieutenants, 43 Captains, 17 Majors, 15 Lt Colonels, and four Colonels participated. Eighteen were rated officers, 18 were analysts/engineers, and 48 were support officers with experience in logistics, acquisition, or administration.

Survey Instrument. A survey was developed to gather information needed to construct the rating profiles. One part asked respondents for demographic data, such as time in service, supervisory experience, gender, rank, age, source of commission, job category, etc. Next, respondents rated the importance of 100 behaviors (approximately 25 in each category) extracted from

the literature (see Tables 1-4). The behaviors were rated on a seven-point Likert scale with answers ranging from "1 = Extremely unimportant to 7 = Extremely important." A copy of the survey is at Appendix A.

Analysis. Mean importance scores were calculated for the whole sample and for three sub-categories of officers: rated officers, support officers, and analysts/engineers. Initially, principal components analysis and Cronbach's alpha were used to refine the dimensional scales. Principal components analysis was used to refine the dimensional categories. A few items with loadings greater than .30 on two or more dimensions were eliminated. Cronbach's alphas were computed as indices of internal consistency—they represent a "characteristic of a test possessed by virtue of the positive intercorrelations of the items composing it" (Crocker and Algina, 1986:138).

To preclude problems associated with highly intercorrelated performance dimensions, Hendrix (1995) recommended a procedure for ensuring performance dimensions did not overlap. To follow this advice, correlations between the remaining behaviors were computed. Then, a program developed by Van Scotter (1995) was used to cluster the behaviors into groups that were internally homogeneous but relatively orthogonal between groups (with item correlations less than .30 between groups and greater than .30 within group). The result was a list of four-behavior sets containing one behavior from each category. For example, one entry on the list included the following behaviors: "acts courteously" (interpersonal), "uses good judgment in decision making"

(leadership), “performs safely” (task performance), and “puts extra effort into a task” (job dedication).

Survey #2

Combinations of four behaviors formed this way were used to create the 50 hypothetical ratee profiles used in the second survey which is described below.

Sample and Procedure. Participating supervisors were all Air Force officers stationed at Wright-Patterson Air Force Base. Participation was strictly voluntary and subjects were told their individual responses would be completely confidential. A total of 210 officers completed all portions of the survey. Incomplete data for fourteen other officers was discarded (nine additional surveys were discarded because their data contained outliers). Table 5 shows the sample size for each demographic category investigated.

Table 5. Sample Size For Each Demographic Category

Demographic Category	Options	Sample Size
Job Category	Rated Officers	26
	Support Officers	130
	Analysts/Engineers	45
Gender	Male	171
	Female	30
Race	White	174
	Non-White	27
Rank	Company Grade	138
	Field Grade	63
Commissioning Source	USAFA	35
	ROTC	102
	OTS	64

Survey Instrument. A computer survey instrument (Van Scotter, 1995) was used to administer the survey. It consisted of three parts. The first asked respondents to describe themselves in terms of their experience, gender, rank, race, age, source of commission, and job category. The second part of the survey provided general information on the performance categories, established a scenario for the survey, explained the information in each profile and included one practice profile. This section was included in this survey to address some of the methodological problems of policy capturing. For example, Hendrix (1995) and Hobson and Gibson (1983) emphasized the profiles should conform to realistic rating scenarios so that respondents feel comfortable with the rating

procedure (1983:463). For this reason, the ratee scenario presented in Figure 2 was included in the survey instructions.

The last part of the survey contained profiles of 50 hypothetical officers. The profiles contained combinations of behaviors that were inter-correlated less than .30.

> You have just been deployed to a classified location as a Squadron Commander. Several junior officers are due to rotate back home in a few days. Some are already gone. Unfortunately, the last Squadron Commander never wrote Letters of Evaluation (LOEs) on them. The Base Commander tasked you to complete the LOEs immediately.
>
> The old Squadron Commander had supervisors rate the officers' leadership, task performance, job dedication and interpersonal performance. He also obtained examples of their performance in these areas. This information was used to develop brief profiles. At best, the profiles are just a snapshot of the officers' performance, but they are all you have to go on.
>
> To finish the LOEs, you must rate each officer's OVERALL EFFECTIVENESS. You should be ready to justify your ratings to the Base Commander. When rating the profiles, assume your squadron is typical for your career field, and that the junior officers are in typical entry-level positions.

Figure 2. Ratee Scenario

Each profile consisted of four behaviors in bullet format. The mean score obtained from the previous analysis was displayed to simplify the rating task. This score represents the hypothetical officer's rating in each performance category. Raters viewed the hypothetical ratee profiles on screens like the one shown in Figure 3. The "Xs" represent the relative level of performance on a scale ranging from one to five. After entering each overall rating, supervisors were asked, "Which category influenced your overall rating the most?" The

same process was repeated for all 50 profiles. A copy of the behaviors and their performance category ratings/score is attached at Appendix B.

Analysis. Preliminary analysis identified nine extreme outliers that were more than three standard deviations from the mean. They were eliminated, leaving 201 usable cases. Multiple regression analysis was used to test the hypothesis that task performance, job dedication, interpersonal facilitation, and

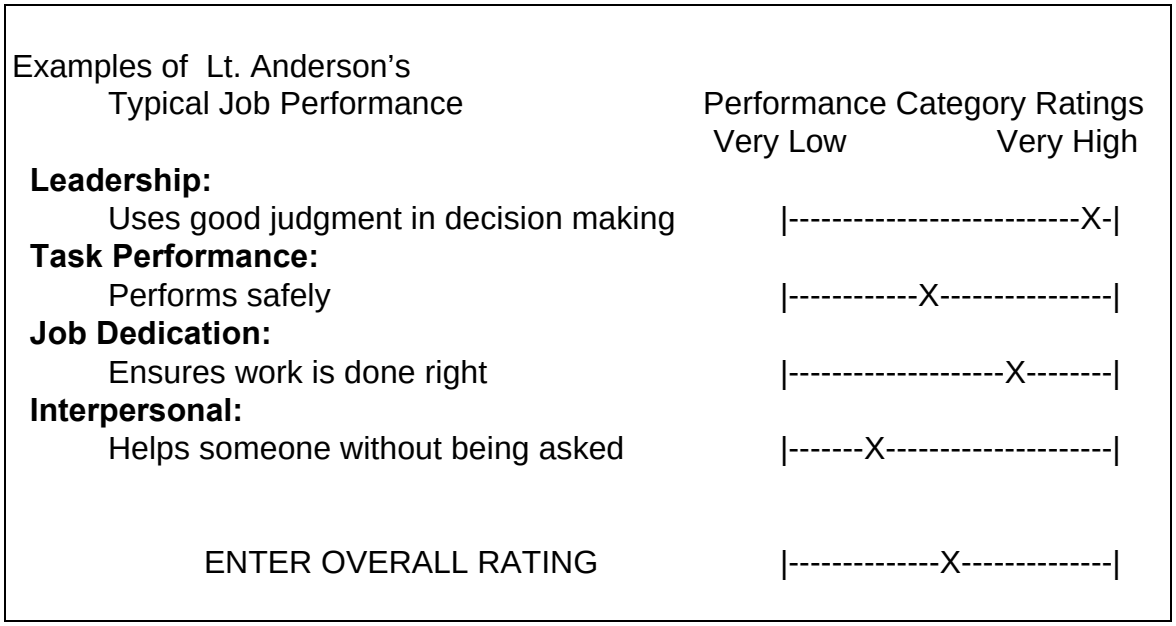

Figure 3. Profile Format

leadership each explained a unique portion of officer performance. The dependent variable in this analysis was the overall performance score. The independent variables were the task performance, job dedication, interpersonal facilitation, and leadership scores. Regression analyses of each respondent's overall ratings provided beta weights for each of the performance categories. This statistic gives the relative importance of each of the performance dimensions.

Next, I computed the means and standard deviations for the beta weights in the (N = 201) regression equations (the rating policies), the R^2 for the equations which measured the raters' consistency, and the number of times each behavioral category was selected as the most important. The primary research questions were tested using the whole sample, but other questions were addressed using only rated officers, support officers, or analysts/engineers. The mean beta weights provide evidence about which class of behaviors contribute the most to effective junior officer performance.

The third analysis was accomplished using Analysis of Variance and the Tukey procedure for multiple comparisons (Neter, Wasserman, and Kutner, 1990:589). Multiple comparisons were accomplished at the $\alpha = .05$ level of significance (McClave and Benson, 1994: 867). In these analyses, the influence of job category, commissioning source, grade, sex, and race on the beta weights were examined. These analyses provided answers to the second and third objectives of this study, which were "Does the importance of the four performance factors vary by officer job type?" and "Do the demographic variables have a significant effect on rating policies?"

The final procedure investigated the consistency of overall ratings with the dimensional ratings obtained in the preliminary study. The squared multiple correlation, R^2, represented the proportion of the total variability accounted for by the expert scores and was used to index the degree of consistency (McClave and Benson, 1994:489).

IV. Results

This chapter describes the results obtained in the analysis conducted on the individual behaviors within each performance domain and presents the model of individual officer effectiveness.

Profile Dimension Intercorrelations

Intercorrelations of the behaviors contained in the 50 profiles are shown in Table 6. Cronbach's alphas were computed as an index of internal consistency of the leadership, task performance, interpersonal facilitation, and job dedication items. They indicate a considerable degree of consistency. The table confirms that the profile dimensions were orthogonal enough for the purposes of this study. Thus, it is unlikely problems associated with multicollinearity would affect the results.

Table 6. Intercorrelations Among Profile Dimensions

Dimension	1	2	3	4
1. Leadership	(.91)	---	---	---
2. Task Performance	.04	(.89)	---	---
3. Interpersonal Facilitation	-.14	.03	(.93)	---
4. Job Dedication	-.04	.05	-.13	(.92)

Notes: N = 50 profiles. 201 Supervisors. $p < .05$ for $r > .037$.
Reliabilities are shown on the diagonal.

Performance Item Mean Ratings

The first objective of this study was to identify the types of performance behaviors Air Force officers view as most important for effective officership. Mean importance ratings for performance items describing junior officer leadership, task performance, interpersonal facilitation, and job dedication are shown in Tables 7-10. The mean scores for the total sample ranged from 5.24 for interpersonal facilitation to 5.54 for leadership on a 7-point scale (N = 84 supervisors). The mean ratings represent the within-category value of the performance items.

Overall Performance Ratings

The second objective of this study was to test the between-category relationships between leadership, task performance, interpersonal facilitation, job dedication, and a supervisor's overall performance rating policy. A total of 201 sets of overall ratings based on the 50 hypothetical profiles were regressed on item mean scores (developed in the preliminary research) for each of the performance categories. The mean beta weights obtained for each of the performance categories, shown in Figure 4 (presented on page 44), support the proposed model. The mean beta weights for leadership ($\beta = .46$, $T = 19.19$), task performance ($\beta = .34$, $T = 19.96$), interpersonal facilitation ($\beta = .27$, $T = 15.07$), and job dedication ($\beta = .17$, $T = 25.44$) are all significantly different from zero ($p < .05$), which indicates each performance dimension contributed significantly and independently to overall performance ratings. Therefore, the

first hypothesis is supported—supervisors use all four categories in making decisions about overall junior officer performance.

Table 7. Mean Importance Ratings Of Leadership Behaviors

Behavior	Support	Rated	Anl/Eng	Total
Using good judgment in decision making	6.61	6.17	6.33	6.44
Providing appropriate feedback to subordinates	6.15	5.88	5.94	6.04
Supporting subordinates	6.07	6.05	6.22	6.10
Recognizing and encouraging effective performance	5.92	6.17	5.88	5.97
Guiding and directing subordinates effectively	6.02	6.00	5.72	5.94
Behaving consistently with subordinates	5.79	6.29	5.50	5.83
Speaking effectively	5.79	5.94	5.77	5.82
Reacting confidently when the unexpected occurs	5.84	5.76	5.77	5.81
Ensuring deadlines and performance standards are met	5.74	5.88	5.83	5.79
Working to create an effective unit atmosphere	5.76	5.64	5.61	5.70
Representing the group effectively	5.71	5.23	6.00	5.67
Keeping subordinates focused on mission requirements	5.53	5.88	5.77	5.67
Making tough decisions quickly	5.38	5.41	5.05	5.31
Assigning subordinates duties and responsibilities appropriate for their abilities	5.28	6.00	5.61	5.52
Monitoring the status of work in progress	5.43	5.41	5.55	5.45
Resolving conflicting organizational demands	5.25	5.58	5.72	5.44
Resolving conflicts between members of the unit	5.53	5.35	5.55	5.50
Coordinating subordinates' efforts to minimize conflicts	5.10	5.23	5.50	5.22
Taking a position on controversial issues	4.97	5.58	5.00	5.12
Persuading others both inside and outside the organization	4.97	5.11	4.83	4.97
Avoiding trespassing on others' responsibility areas	4.64	4.76	4.66	4.67
Maintaining high visibility both on and off the job	4.00	4.11	3.33	3.86
TOTALS	5.52	5.61	5.51	5.54

NOTES: N = 46 for Support; N = 18 for Rated officers; and N = 18 for analysts/engineers. Items were rated on a 7 point scale ranging from 1 = Extremely unimportant to 7 = Extremely Important.

Table 8. Mean Importance Ratings Of Task Performance Behaviors

Behavior	Support	Rated	Anl/Eng	Total
Communicating task information effectively	6.05	5.88	6.00	6.00
Anticipating potential problems	6.05	5.82	5.83	5.94
Performing safely	5.64	5.82	6.44	5.87
Planning and organizing work	5.89	5.82	5.88	5.87
Prioritizing work tasks efficiently	5.89	5.70	6.00	5.87
Collecting and accurately interpreting information	5.51	5.70	5.77	5.62
Writing clearly and concisely	5.82	5.52	5.16	5.59
Using technical expertise to meet real world needs	5.20	5.70	6.27	5.58
Accomplishing job tasks expertly	5.10	5.70	5.72	5.39
Solving urgent, unexpected problems expertly	5.38	5.23	5.38	5.35
Performing routine tasks efficiently	5.12	5.00	5.50	5.18
Using technical material effectively	4.74	5.47	5.66	5.13
Providing expert technical advice to others	4.74	5.29	5.44	5.04
Providing others with current technical information	4.79	5.11	5.27	4.98
Troubleshooting expertly	4.69	5.00	5.55	4.97
Performing specialized tasks skillfully	4.58	5.00	5.55	4.91
Keeping up with the newest technology	4.56	5.41	5.11	4.89
Solving technical problems expertly	4.46	5.35	5.33	4.87
Using equipment, tools, and computers proficiently	4.48	4.64	4.82	4.60
Operating equipment skillfully	4.25	4.41	5.27	4.54
TOTALS	5.15	5.38	5.60	5.31

NOTES: N = 46 for Support; N = 18 for Rated officers; and N = 18 for analysts/engineers. Items were rated on a 7 point scale ranging from 1 = Extremely unimportant to 7 = Extremely Important.

Table 9. Mean Importance Ratings Of Interpersonal Behaviors

Behavior	Support	Rated	Anl/Eng	Total
Showing respect for others	6.20	6.00	6.25	6.07
Treating others fairly	6.17	6.00	6.37	6.00
Praising coworkers when they are successful	5.82	5.75	6.00	5.73
Cooperating with others in the team effectively	5.74	5.75	5.87	5.73
Listening to others ideas about getting work done	5.76	5.75	5.62	5.65
Talking to others before taking actions that affect them	5.82	5.75	5.62	5.63
Coordinating actions with others	5.76	5.25	5.75	5.57
Developing and maintaining good working relationships	5.71	5.50	5.75	5.55
Lending a hand when a coworker needs it	5.35	6.00	6.00	5.47
Seeking others opinions	5.56	5.00	5.62	5.42
Getting along with others	5.41	5.25	5.87	5.31
Acting courteously	5.33	6.00	5.75	5.26
Voluntarily pitching in to help the group	5.20	6.00	5.12	5.13
Encouraging others to overcome differences and get along	5.15	5.50	5.50	5.05
Supporting or encouraging a coworker	5.05	5.50	5.37	5.02
Helping someone without being asked	5.00	5.50	5.25	5.00
Saying things to make people feel good about themselves	5.00	5.27	5.37	4.92
Displaying a cheerful, confident outlook	4.97	4.75	5.75	4.92
Displaying concern for others	5.15	5.00	5.12	4.92
Encouraging coworkers to stick together in hard times	4.87	5.25	5.50	4.81
Saying things to reduce conflicts	4.74	5.00	5.62	4.76
Offering to help others do their work	4.58	5.50	4.50	4.57
Offering friendly advice	4.51	4.75	5.37	4.50
Give coworkers advice about how to do their jobs	4.23	4.75	4.12	4.07
Acting warm and sociable	4.15	4.00	4.62	4.05
Avoiding arguments	3.82	3.50	4.50	3.73
TOTALS	5.19	5.32	5.47	5.24

NOTES: N = 46 for Support; N = 18 for Rated officers; and N = 18 for analysts/engineers. Items were rated on a 7 point scale ranging from 1 = Extremely unimportant to 7 = Extremely Important.

Table 10. Mean Importance Ratings Of Job Dedication Behaviors

Behavior	Support	Rated	Anl/Eng	Total
Taking responsibility for his/her actions	6.50	6.00	6.37	6.42
Ensuring work is done right	6.03	5.75	6.50	6.07
Performing consistently and reliably	6.03	5.75	6.00	6.00
Following the supervisors instructions	5.96	5.50	6.12	5.94
Complying with instructions even when supervision	5.92	6.00	5.62	5.86
Taking the initiative to solve a work problem	5.92	6.00	5.62	5.86
Adapting to difficult conditions	5.78	6.25	5.62	5.81
Displaying proper military appearance and bearing	5.75	5.50	5.87	5.73
Showing respect for authority	5.67	5.50	6.25	5.73
Working hard	5.75	5.00	6.00	5.68
Rendering proper military courtesy	5.67	5.75	5.87	5.68
Paying close attention to important details	5.50	6.00	5.75	5.63
Overcoming obstacles to complete a task	5.42	5.00	5.50	5.42
Putting extra effort into a task	5.32	6.00	5.25	5.39
Striving to excel	5.35	5.25	5.75	5.36
Defending the supervisors decisions	5.50	5.00	5.12	5.34
Overcoming hardships	5.32	5.25	5.50	5.34
Putting in extra hours to get work done on time	5.28	5.75	5.37	5.31
Giving-up personal time for the mission	5.17	5.25	5.50	5.23
Avoiding shortcuts when work is overdue	5.07	5.25	5.00	5.07
Volunteering for a difficult assignment	5.00	5.00	4.87	4.97
Tackling a difficult work assignment enthusiastically	4.75	4.50	5.75	4.86
Asking for a challenging work assignment	4.67	4.50	4.75	4.68
Volunteering for additional duties	3.96	5.25	3.87	4.00
Totals	5.42	5.45	5.58	5.48

NOTES: N = 46 for Support; N = 18 for Rated officers; and N = 18 for analysts/engineers. Items were rated on a 7 point scale ranging from 1 = Extremely unimportant to 7 = Extremely Important.

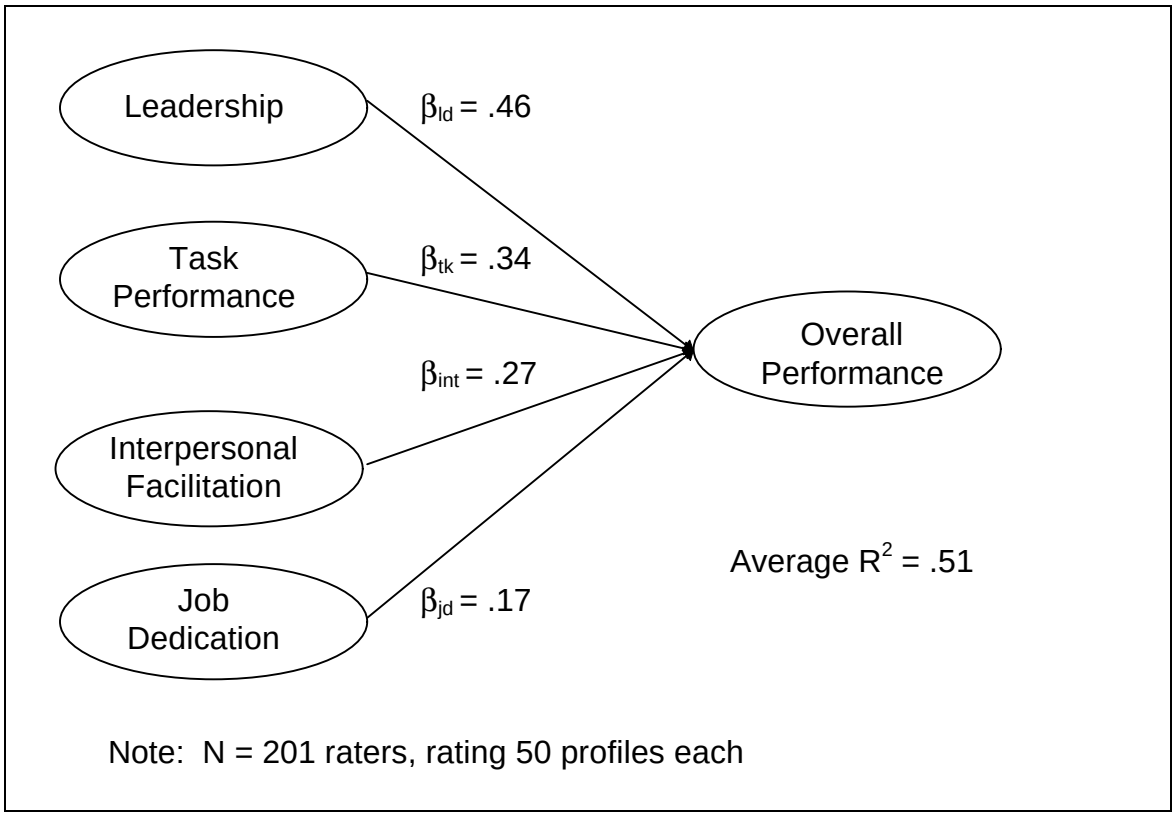

Figure 4. Mean Standardized Beta Weights for the Model of Officer Performance

Importance of Performance Categories

Table 11 provides additional information about the relative importance of each performance category. Survey respondents were asked "Which behavior category influenced your overall performance rating the most?" Table 11 shows the percentage of times leadership, task performance, interpersonal facilitation, and job dedication were selected as the most important for each job category. This table shows that each group chose leadership as most important. Task performance was chosen as the second most important performance dimension. Interpersonal facilitation and job dedication were chosen approximately the

same number of times and both were selected less than either leadership or task performance.

Table 11. Percent Of Times Selected As Most Important Category

Performance Category	Rated	Occupational Group Support	Anal/Eng	Total
Leadership	36.38	40.12	39.54	39.58
Task Performance	33.76	27.63	27.34	28.03
Interpersonal Facilitation	14.86	15.31	17.89	15.81
Job Dedication	14.71	16.93	13.97	16.01

Category Importance by Job Type

Part of the third objective was to determine if the importance of leadership, task performance, interpersonal facilitation, and job dedication varies by officer job type. Table 12 shows the standardized regression weights for the three occupational groups. Figure 5 shows a graphical comparison of the standardized beta weights of each performance category for each occupational group. Table 12 and Figure 5 provide the average importance ratings of the different performance categories by officer job type. A three by four ANOVA was conducted to test hypothesis 2, which states the importance of four performance categories varies by officer occupation. The ANOVA results presented in Table 13 provided evidence to reject the second hypothesis that the three occupational groups differ in the importance they attribute to the performance dimensions. The mean standardized beta weights for the performance categories computed for the three occupational groups are not statistically significant ($p < .05$).

Similarly, the interaction between the performance domains and the job categories is also not significant. Further tests of occupational differences between the mean importance of the performance categories was not appropriate (Cohen and Cohen, 1983:390); therefore, the hypothesis that the importance of the four performance categories varies by officer occupation was not supported.

Table 12. Standardized Regression Weights For Occupational Categories

	Officer Job Type			
Behavior Category	Support	Rated	Anal/Eng	Total
Leadership	0.47	0.41	0.45	0.46
Job Dedication	0.16	0.17	0.19	0.17
Task Performance	0.34	0.39	0.31	0.34
Interpersonal Facilitation	0.26	0.24	0.31	0.27

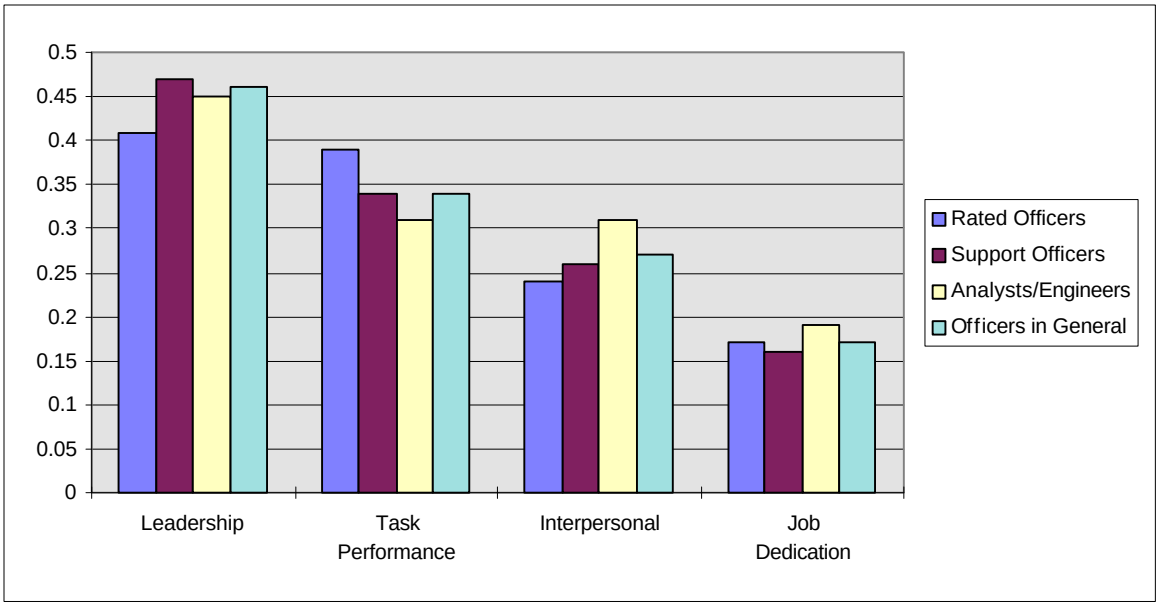

Figure 5. Comparison of Regression Weights Between Job Categories

Table 13. Occupation x Performance Category ANOVA Results

Source of Variation	DF	F	Sig of F
Job	2	.078	.925
Cat	3	100.327	.000
Job x Cat	6	1.604	.143

Notes: N = 201; Cat = Performance Categories;
Job = Officer Occupations

Importance Variance by Demographics

The study also set out to determine whether or not the specific patterns of job-related behaviors considered important in supervisors' rating policies vary with respect to the grade, race, sex, or commissioning source of the supervisor.

Table 14 shows mean beta weights for each performance category and consistency measures for sub-groups of officers formed on the basis of grade level, commissioning source, race, and sex. Separate group by performance category ANOVAs were conducted for each of the demographic sub-groups listed in Table 14. The results of the analyses testing Hypothesis 3 through 6 are presented in Table 15.

Table 14. Mean Beta Weights And R^2 By Officer Sub-Groups

Sub-Group	N	Lead	Task	Int	Job Ded	R^2
Commissioning Source:						
USAFA	35	.44	.33	.30	.18	.49
ROTC	64	.49	.33	.24	.14	.54
OTS	102	.44	.35	.28	.18	.50
Grade:						
Company	141	.46	.32	.29	.17	.51
Field	60	.44	.38	.22	.17	.52
Gender:						
Male	171	.46	.34	.27	.17	.51
Female	30	.45	.36	.37	.16	.52
Race:						
White	175	.46	.35	.27	.17	.51
Non-white	26	.45	.32	.25	.15	.48

Grade. Hypothesis 3 states performance category beta weights for field grade officers differ from those of company grade officers. Results of an ANOVA testing the association between mean importance rating of the performance categories and the rater's grade are presented in Table 15. While main effects

of grade were not significant, the interaction between grade and performance category was significant ($F_{137,62} = 3.783$, $p < .05$).

Table 15. Demographics x Performance Category ANOVAS

Source of Variation	DF	F	Sig of F
Grade x Category ANOVA			
Grade	1	.465	.496
Cat	3	100.327	.000
Grade x Cat	3	.110	.010
Race x Category ANOVA			
Race	1	1.037	.309
Cat	3	99.772	.000
Race x Cat	3	.103	.959
Sex x Category ANOVA			
Sex	1	.005	.942
Cat	3	99.676	.000
Sex x Cat	3	.190	.903
Commissioning Source x Category ANOVA			
Source	2	.401	.670
Cat	3	100.596	.000
Source x Cat	6	1.854	.086

Notes: N = 201; Cat = Performance Category; for grade: 1 = Company grade and 2 = Field Grade; for race: 1 = White and 2 = Nonwhite; for sex: 1 = Male and 2 = Female; for commissioning source: 1 = USAFA, 2 = ROTC, and 3 = OTS.

Because the F-test provided evidence of an interaction, one-way ANOVAs were conducted to determine which performance categories differed with respect to the rater's grade. Differences between the task performance ($F_{137,62} = 3.62$, $p < .05$) and the interpersonal facilitation ($F_{137,62} = 6.84$, $p < .05$) weights raters'

used were significantly associated with the rater's grade level. The Tukey method of multiple comparisons indicated company grade officers rated interpersonal facilitation ($Q = 2.902$, $p < .05$) as more important for effective performance than field grade officers did. On the other hand, the field grade officers judged task performance ($Q = 2.902$, $p < .05$) as significantly more important than company grade officers did.

Race. The results of an ANOVA testing the association between the weights of the performance categories and the race of the rater are also presented in Table 15. Race was divided into two groups: white and non-white. The results support did not provide evidence that white and non-whites had different rating policies.

Sex. The results of an ANOVA, testing the association of the importance of the performance categories with the rater's gender, are presented in Table 15. The results did not support the fifth hypothesis; neither the main effects for sex nor the interaction between sex and performance category were significant. Thus, the importance of the four performance categories did not vary by sex.

Commissioning Source. The sixth hypothesis says the beta weights for the performance categories vary with respect to the supervisor's commissioning source. An ANOVA comparing the performance categories to the rater's commissioning source failed to support this hypothesis. The results are also provided in Table 15. Neither the main effects for commissioning source, nor the interaction between the commissioning source and the performance category were significant. Thus, there are no significant differences between the mean

importance ratings of the performance categories across the three commissioning sources.

Category Importance. The relative importance of each performance category was shown in Table 11. It showed the percentage of times leadership, task performance, interpersonal facilitation, and job dedication were selected as the most important category. ANOVAs were conducted to determine if the job category, grade, race, sex, or commissioning source affected the number of times each category was selected as most important in a way that was consistent with hypotheses 2-6 which examined the association between those variables and the performance domain beta weights. ANOVAs for the number of times each category was selected provided results similar to those reported above for the beta weights (i.e., only grade was a significant factor).

Rating Policy Consistency

The consistency of the rating policies by officer sub-group, hypotheses 7-11, were tested using one-way ANOVAs. The coefficient of determination, R^2, was used as an index of consistency for this study as it represents the proportion of the total sample variability explained in the rating policy (McClave and Benson, 1994:489). The seventh hypothesis says the consistency of the rating policy will differ among officers with different job categories. The results of the ANOVA investigating the effects of job category on R^2 indicated the mean R^2s for each of the job categories are not significantly different from each other.

Therefore, the hypothesis that states the consistency of the rating policies will differ among officer job types was not supported.

Hypothesis 8 states the overall rating policies of the field grade officers would be more consistent than those of the company grade officers. Results of the ANOVA rejected this hypothesis. There were no significant differences among the means of R^2 for the company grade officers and the field grade officers. Similarly, there were no significant differences between the consistency in performance ratings of the officers with higher levels of experience than with the officers with less experience.

Results of an ANOVA testing the association between race and R^2 indicated there were no significant differences in rating consistency between white and non-white raters. Therefore, hypothesis 9 was not supported. Similarly, an ANOVA comparing R^2s for male and female raters indicated there were no significant differences between the genders.

The final hypothesis in this area stated the commissioning source of the rater will affect the consistency of the individual's rating policy. Again, the results of the ANOVA did not support this hypothesis, as there were no significant differences in consistency of the rating policies of officers who graduated from different commissioning sources.

V. Discussion

Conclusions

This research supported a four-factor model of junior officer effectiveness. The data indicate that junior officer performance involves a mixture of behaviors from at least four areas—leadership, task performance, interpersonal facilitation, and job dedication. The study identified specific performance behaviors within these dimensions that Air Force officers view as important for effective junior officer performance.

The study also provided evidence that the importance of the four categories varied little across officer groups formed by occupation, gender, race, grade, or commissioning source. The results have several important implications. The findings concerning occupational differences indicates that the commissioning sources do not have to create separate curricula for different types of jobs. It is important to note that the leadership category is the most important contributor to overall performance regardless of officer job category. This suggests the commissioning sources should continue placing emphasis on leadership and also consider increasing the amount of instruction on leadership behaviors useful in real management situations.

Finding that rating policies varied little across demographic groups suggests supervisors use similar criteria regardless of their personal background. The commissioning source, race, and sex of the rater did not affect the importance of the performance categories in the overall performance

evaluation. The grade of the rater, however, played an important role in determining the impact of task performance and interpersonal facilitation. Field grade officers placed greater importance on task performance than did the company grade officers; whereas the company grade officer rated interpersonal skills as more important for effective performance than the field grade officers. With longitudinal data, it might be possible to determine whether this is because officers change their views on performance as they achieve higher ranks, or perhaps officers who emphasize task performance are more likely to achieve higher ranks. Since my data were cross-sectional, the effects of other, possibly unmeasured, variables can not be ruled out. Further research investigating differences with the way field grade and company grade officers view performance may lead to improvements in training that might shorten the learning curve.

Contrary to Borman's (1987) proposal and Van Scotter and Shane's (1995) results, I did not find that entry-level training made a difference in the performance judgments.

Implications

This study should help the Academy, ROTC, and OTS ensure their programs maintain their traditions of relevance to the mission and professional excellence. Specifically, this information can be used by the three Air Force commissioning sources to help focus training on behavioral aspects of performance that are consistent with Air Force requirements. This study has

identified many individual behaviors that supervisors view as important to junior officer effectiveness.

The list of behaviors and the supervisors' rating policies should be particularly helpful in guiding pre-commissioning training programs. Given that leadership was shown to be the most important performance domain, the Academy, ROTC, and OTS may want to increase emphasis on leadership skills and situational leadership exercises. Perhaps they should incorporate instruction on the behaviors identified in this thesis into some parts of their leadership lessons rather than concentrating on a more theory-based approach to leadership or lessons drawn from military history. The cadets should be exposed to these behaviors and have their importance highlighted in some of their training sessions. This list of behaviors should give junior officers an idea of what will be expected from them when they finally get into the "real Air Force." This research focused on behaviors that have been shown to significantly contribute to individual and organizational effectiveness and can be performed and applied every-day regardless of one's specific job or job category.

Results also highlight the importance of interpersonal skills. With the Air Force placing a increasing emphasis on quality, the team approach to conducting business is becoming more prevalent in most jobs. Making a team work successfully requires solid interpersonal skills. This research identified a list of behaviors that may be useful in laying the foundation for teamwork and team building. Because interpersonal behaviors have been found to be an important part of overall effectiveness, the Air Force might also consider

obtaining/selecting officers who have traits associated with interpersonal behaviors. For example, selection criteria for jobs that place a significant emphasis on interpersonal skills could incorporate scores on instruments measuring the personality traits of agreeableness or extroversion.

Similarly, the behavioral definitions for the categories in the model of officer effectiveness might also be used in young officers self-development efforts, Professional Military Education Programs, and by commanders and supervisors to develop their young officers. In essence, the comprehensive definitions of effective and ineffective behavior related to each effectiveness category provide a "rich depiction of the performance requirements for officers which should be useful for the commissioning sources in pinpointing the aspects of performance/officership that need highlighted training" (Borman et al., 1987:1).

Appendix A: Officer Performance Requirements Survey

AFIT/GTM/LAR/95S-7

USAFA SPONSORED

OFFICER PERFORMANCE REQUIREMENTS STUDY

This questionnaire has three sections, which are as follows:

- Section 1: asks questions about your personal characteristics. This information will be used to describe the characteristics of typical participants and show that these individuals are capable of providing the feedback on work performance needed in this study.

- Section 2: asks you to rank performance behaviors in terms of importance. You will be presented with four lists of ten phrases describing various types of behaviors that occur at work. Some of the behaviors are more important than others. You can provide valuable information about work performance by ranking the performance behaviors in terms of importance. There are no right or wrong answers. The importance of the behaviors may differ from one job situation to another or from one supervisor to another. The purpose in this study is to understand how and why this occurs.

- Section 3: asks you to rate the behaviors in terms of their overall importance.

INSTRUCTIONS

1. Please write your responses on the survey.

2. **VERY IMPORTANT:** Please remember that each question is asking how much a specific behavior contributes to the performance of junior officers in your job category (rated officer, logistics/support officer, or analyst/ engineer).

3. The success of this project depends on your honesty and accuracy. Please be as accurate as possible. Your responses will be kept confidential.

4. Please return the completed survey as soon as possible.

5. Thank you for your cooperation.

FOR OFFICIAL USE ONLY

BACKGROUND INFORMATION

Please answer the following questions about your background and job experience. The information will be used to develop a profile of the participants in this study. Your responses will be kept completely confidential.

1. What is your sex?

_____ Male _____ Female

2. What is your race?

_____ White _____ Black _____ Hispanic _____ Asian
_____ Other: Please Specify _____

3. What is your age in years? Fill in: _____ years

4. What is your rank?

_____ General _____ Colonel _____ Lt. Colonel
_____ Major _____ Captain _____ Lieutenant

5. How long have you been in the Air Force? Fill in: _____ years

6. What is your primary AFSC? _____

7. What is your primary job category?

_____ Rated Officer (pilot, navigator, etc.)
_____ Support Officer (logistician, personnel, security police, finance, etc.)
_____ Analysis/Engineer
_____ Other

8. Approximately how long have you worked in your primary job category? Fill in: _____ years

9. Approximately how many years of experience do you have as a supervisor? Fill in: _____ years

10. Approximately how many officers have you supervised in your career (even if you were not their rating official)? Fill in: _____

11. How many officers are you presently supervising? Fill in: _____

12. What is your source of commission?

_____ USAF Academy _____ ROTC _____ OTS
_____ Other

Based on your experience as a supervisor please rank the performance behaviors listed below in order of their overall importance in accomplishing your Air Force job.

- **Please read all of the behaviors in each group before assigning any ranks**
- **Put a 1 next to the most important behavior; 2 next to the second most important behavior, etc. Continue until you have assigned a rank to each of the ten behaviors (i.e., 1-10) in each group.**
- **Ties are not allowed. You must assign a different rank to each behavior.**

13. <u>GROUP 1</u>

_____ Behaving consistently with subordinates

_____ Assigning subordinates duties and responsibilities appropriate for their abilities

_____ Guiding and directing subordinates effectively

_____ Using good judgment in making decisions

_____ Recognizing and encouraging effective performance

_____ Getting subordinates to cooperate effectively

_____ Resolving conflicting organizational demands

_____ Keeping subordinates focused on mission requirements

_____ Supporting subordinates

_____ Ensuring unit deadlines and performance standards are met

---

14. <u>GROUP 2</u>

_____ Performing routine tasks efficiently

_____ Solving urgent, unexpected problems expertly

_____ Using equipment, tools, computers, etc. proficiently

_____ Performing specialized tasks skillfully

_____ Prioritizing his/her own work tasks efficiently

_____ Anticipating potential problems affecting task performance

_____ Communicating task-related information effectively

_____ Planning and organizing his/her own work

_____ Troubleshooting technical problems expertly

_____ Collecting and accurately interpreting information

Based on your experience as a supervisor please rank the performance behaviors listed below in order of their overall importance in accomplishing your Air Force job.

- **Please read all of the behaviors in each group before assigning any ranks**
- **Put a 1 next to the most important behavior; 2 next to the second most important behavior, etc. Continue until you have assigned a rank to each of the ten behaviors (i.e., 1-10) in each group.**
- **Ties are not allowed. You must assign a different rank to each behavior.**

15. GROUP 3

_____ Supporting or encouraging a coworker

_____ Talking to others before taking actions that might affect them

_____ Treating others fairly

_____ Helping someone without being asked

_____ Developing and maintaining good working relationships

_____ Displaying concern for others

_____ Coordinating actions with others

_____ Showing respect for others

_____ Encouraging coworkers to stick together in hard times

_____ Cooperating with others in the team effectively

---

16. GROUP 4

_____ Paying close attention to important details

_____ Taking the initiative to solve a work problem

_____ Overcoming obstacles to complete a task

_____ Tackling a difficult work assignment enthusiastically

_____ Striving to excel

_____ Ensuring work is done right

_____ Working effectively without supervision

_____ Taking responsibility for his/her actions

_____ Performing consistently and reliably

_____ Persisting in the face of adversity

Based on your experience as a supervisor and manager, please indicate how important each behavior listed below is in accomplishing your Air Force job.

- Please circle the appropriate number on the scale at the right:

	Extremely Unimportant			Not Unimportant Or Important			Extremely Important
	1	**2**	**3**	**4**	**5**	**6**	**7**
17. Behaving consistently with subordinates	1	2	3	4	5	6	7
18. Assigning subordinates duties and responsibilities appropriate for their abilities	1	2	3	4	5	6	7
19. Performing routine tasks efficiently	1	2	3	4	5	6	7
20. Solving urgent, unexpected problems expertly	1	2	3	4	5	6	7
21. Supporting or encouraging a coworker	1	2	3	4	5	6	7
22. Talking to others before taking actions that affect them	1	2	3	4	5	6	7
23. Paying close attention to important details	1	2	3	4	5	6	7
24. Taking the initiative to solve a work problem	1	2	3	4	5	6	7
25. Guiding and directing subordinates effectively	1	2	3	4	5	6	7
26. Using good judgment in decision making	1	2	3	4	5	6	7
27. Using equipment, tools, and computers proficiently	1	2	3	4	5	6	7
28. Performing specialized tasks skillfully	1	2	3	4	5	6	7
29. Working hard	1	2	3	4	5	6	7
30. Talking to others before taking actions that affect them	1	2	3	4	5	6	7
31. Overcoming obstacles to complete a task	1	2	3	4	5	6	7
32. Tackling difficult work assignments enthusiastically	1	2	3	4	5	6	7
33. Recognizing and encouraging effective performance	1	2	3	4	5	6	7
34. Getting subordinates to cooperate effectively	1	2	3	4	5	6	7
35. Writing clearly and concisely	1	2	3	4	5	6	7
36. Operating equipment skillfully	1	2	3	4	5	6	7
37. Treating others fairly	1	2	3	4	5	6	7
38. Helping someone without being asked	1	2	3	4	5	6	7
39. Striving to excel	1	2	3	4	5	6	7

Based on your experience as a supervisor and manager, please indicate how important each behavior listed below is in accomplishing your Air Force job.

- Please circle the appropriate number on the scale at the right:

	Extremely Unimportant			Not Unimportant Or Important			Extremely Important
	1	**2**	**3**	**4**	**5**	**6**	**7**
40. Ensuring work is done right	1	2	3	4	5	6	7
41. Resolving conflicting organizational demands	1	2	3	4	5	6	7
42. Keeping subordinates focused on mission requirements	1	2	3	4	5	6	7
43. Providing others with current technical information	1	2	3	4	5	6	7
44. Prioritizing work tasks efficiently	1	2	3	4	5	6	7
45. Developing and maintaining good working relationships	1	2	3	4	5	6	7
46. Displaying concern for others	1	2	3	4	5	6	7
47. Following the supervisor’s instructions	1	2	3	4	5	6	7
48. Following proper procedures and avoiding unauthorized shortcuts	1	2	3	4	5	6	7
49. Maintaining high visibility both on and off the job	1	2	3	4	5	6	7
50. Supporting subordinates	1	2	3	4	5	6	7
51. Anticipating potential problems	1	2	3	4	5	6	7
52. Communicating task information effectively	1	2	3	4	5	6	7
53. Coordinating actions with others	1	2	3	4	5	6	7
54. Showing respect for others	1	2	3	4	5	6	7
55. Taking responsibility for his/her actions	1	2	3	4	5	6	7
56. Working effectively without supervision	1	2	3	4	5	6	7
57. Ensuring unit deadlines and performance standards are met	1	2	3	4	5	6	7
58. Representing the group effectively	1	2	3	4	5	6	7
59. Planning and organizing work	1	2	3	4	5	6	7
60. Troubleshooting expertly	1	2	3	4	5	6	7
61. Encouraging workers to stick together in hard times	1	2	3	4	5	6	7
62. Cooperating with others in the team effectively	1	2	3	4	5	6	7
63. Performing consistently and reliably	1	2	3	4	5	6	7
64. Persisting in the face of adversity	1	2	3	4	5	6	7

Based on your experience as a supervisor and manager, please indicate how important each behavior listed below is in accomplishing your Air Force job.

- Please circle the appropriate number on the scale at the right:

	Extremely Unimportant			Not Unimportant Or Important			Extremely Important
	1	**2**	**3**	**4**	**5**	**6**	**7**
65. Speaking effectively	1	2	3	4	5	6	7
66. Avoiding trespassing in others' areas of responsibility	1	2	3	4	5	6	7
67. Collecting and accurately interpreting information	1	2	3	4	5	6	7
68. Keeping up with the newest technology	1	2	3	4	5	6	7
69. Displaying a cheerful, confident outlook	1	2	3	4	5	6	7
70. Considering others needs before acting	1	2	3	4	5	6	7
71. Complying with instructions even when supervisors are not present	1	2	3	4	5	6	7
72. Volunteering for additional duties	1	2	3	4	5	6	7
73. Making tough decisions quickly	1	2	3	4	5	6	7
74. Providing appropriate feedback to subordinates	1	2	3	4	5	6	7
75. Performing safely	1	2	3	4	5	6	7
76. Using technical expertise to meet real world needs	1	2	3	4	5	6	7
77. Warning the boss about an upcoming situation	1	2	3	4	5	6	7
78. Offering to help others do their work	1	2	3	4	5	6	7
79. Putting extra effort into a task	1	2	3	4	5	6	7
80. Exercising personal discipline and self-control	1	2	3	4	5	6	7
81. Reacting confidently when the unexpected occurs	1	2	3	4	5	6	7
82. Taking a position on controversial issues	1	2	3	4	5	6	7
83. Providing expert technical advice to others	1	2	3	4	5	6	7
84. Using technical material effectively	1	2	3	4	5	6	7
85. Voluntarily pitching in to help the group	1	2	3	4	5	6	7
86. Lending a hand when a coworker needs it	1	2	3	4	5	6	7
87. Giving up personal time for the mission	1	2	3	4	5	6	7
88. Adapting to difficult conditions	1	2	3	4	5	6	7

Based on your experience as a supervisor and manager, please indicate how important each behavior listed below is in accomplishing your Air Force job.

- Please circle the appropriate number on the scale at the right:

		Extremely Unimportant			Not Unimportant Or Important			Extremely Important
		1	**2**	**3**	**4**	**5**	**6**	**7**
89.	Working to create an effective unit atmosphere	1	2	3	4	5	6	7
90.	Persuading others both inside and outside the organization	1	2	3	4	5	6	7
91.	Solving technical problems expertly	1	2	3	4	5	6	7
92.	Accomplishing job tasks expertly	1	2	3	4	5	6	7
93.	Praising coworkers when they are successful	1	2	3	4	5	6	7
94.	Listening to others ideas about getting work done	1	2	3	4	5	6	7
95.	Overcoming hardships	1	2	3	4	5	6	7
96.	Showing respect for authority	1	2	3	4	5	6	7
97.	Resolving conflicts between members of the unit	1	2	3	4	5	6	7
98.	Coordinating subordinates' efforts to minimize conflict	1	2	3	4	5	6	7
99.	Give coworkers advice about how to do their jobs	1	2	3	4	5	6	7
100.	Saying things to make people feel good about themselves or the work group	1	2	3	4	5	6	7
101.	Maintaining a professional appearance	1	2	3	4	5	6	7
102.	Volunteering for a difficult assignment	1	2	3	4	5	6	7
103.	Monitoring the status of work in progress	1	2	3	4	5	6	7
104.	Encouraging others to overcome differences and get along	1	2	3	4	5	6	7
105.	Saying things to reduce conflicts	1	2	3	4	5	6	7
106.	Putting in extra hours to get work done on time	1	2	3	4	5	6	7
107.	Working harder than necessary	1	2	3	4	5	6	7
108.	Avoiding arguments	1	2	3	4	5	6	7
109.	Acting warm and sociable	1	2	3	4	5	6	7
110.	Asking for a challenging work assignment	1	2	3	4	5	6	7
111.	Avoiding shortcuts when work is overdue	1	2	3	4	5	6	7

Based on your experience as a supervisor and manager, please indicate how important each behavior listed below is in accomplishing your Air Force job.

- Please circle the appropriate number on the scale at the right:

	Extremely Unimportant			Not Unimportant Or Important			Extremely Important
	1	**2**	**3**	**4**	**5**	**6**	**7**
112. Seeking others opinions	1	2	3	4	5	6	7
113. Offering friendly advice	1	2	3	4	5	6	7
114. Defending the supervisors' decisions	1	2	3	4	5	6	7
115. Displaying proper military appearance and bearing	1	2	3	4	5	6	7
116. Getting along with others	1	2	3	4	5	6	7
117. Acting courteously	1	2	3	4	5	6	7
118. Rendering proper military courtesy	1	2	3	4	5	6	7

Appendix B: Profile Listing

Profile #	Name	Behaviors	Scores
001		Assigns duties appropriate for subordinate's abilities	3
001		Accomplishes job tasks expertly	3
001		Works hard	3
001	Lt. Dayon's	Cooperates with others in the team effectively	4
002		Provides appropriate feedback to subordinates	4
002		Provides others with current technical information	2
002		Shows respect for authority	4
002	Lt. Carr's	Avoids arguments	1
003		Coordinates subordinates' efforts to minimize conflict	3
003		Accomplishes job tasks expertly	3
003		Works hard	3
003	Lt. Gray's	Offers to help others do their work	2
004		Uses good judgment in decision making	5
004		Anticipates potential problems	4
004		Follows procedures and avoiding unauthorized shortcuts	3
004	Lt. Innman's	Considers others needs before acting	3
005		Behaves consistently with subordinates	4
005		Troubleshoots expertly	2
005		Puts extra effort into a task	3
005	Lt. Harris's	Displays concern for others	3
006		Avoids trespassing in others' areas of responsibility	2
006		Performs specialized tasks skillfully	2
006		Puts extra effort into a task	3
006	Lt. Campbell's	Acts courteously	4
007		Uses good judgment in decision making	5
007		Solves technical problems expertly	2
007		Puts extra effort into a task	3
007	Lt. Cobb's	Avoids arguments	1
008		Assigns duties appropriate for subordinate's abilities	3
008		Solves technical problems expertly	2
008		Asks for a challenging work assignment	2
008	Lt. Field's	Displays concern for others	3
009		Guides and directs subordinates effectively	4
009		Collects and accurately interprets information	4
009		Follows the supervisor's instructions	4
009	Lt. Brewer's	Encourages workers to stick together in hard times	3
010		Provides appropriate feedback to subordinates	4
010		Writes clearly and concisely	3
010		Volunteers for additional duties	1
010	Lt. Williams's	Acts courteously	4

Profile #	Name	Behaviors	Scores
011		Maintains high visibility both on and off the job	1
011		Accomplishes job tasks expertly	3
011		Strives to excel	3
011	Lt. Rockett's	Helps someone without being asked	2
012		Assigns duties appropriate for subordinate's abilities	3
012		Troubleshoots expertly	2
012		Performs consistently and reliably	4
012	Lt. Chamber's	Says things to make people feel good about themselves	3
013		Works to create an effective unit atmosphere	3
013		Performs safely	4
013		Asks for a challenging work assignment	2
013	Lt. Davis's	Says things to make people feel good about themselves	3
014		Behaves consistently with subordinates	4
014		Troubleshoots expertly	2
014		Puts in extra hours to get work done on time	3
014	Lt. Abell's	Praises coworkers when they are successful	4
015		Resolves conflicts between members of the unit	3
015		Uses technical material effectively	3
015		Puts extra effort into a task	3
015	Lt. Anderson's	Lends a hand when a coworker needs it	4
016		Maintains high visibility both on and off the job	1
016		Performs specialized tasks skillfully	2
016		Follows instructions when supervisors are not present	4
016	Lt. Cox's	Talks to others before taking actions that affect them	4
017		Monitors the status of work in progress	3
017		Solves technical problems expertly	2
017		Strives to excel	3
017	Lt. Hill's	Cooperates with others in the team effectively	4
018		Assigns duties appropriate for subordinate's abilities	3
018		Solves technical problems expertly	2
018		Puts extra effort into a task	3
018	Lt. Dutcher's	Encourages workers to stick together in hard times	3
019		Behaves consistently with subordinates	4
019		Uses technical material effectively	3
019		Performs consistently and reliably	4
019	Lt. Price's	Says things to make people feel good about themselves	3
020		Maintains high visibility both on and off the job	1
020		Performs specialized tasks skillfully	2
020		Strives to excel	3
020	Lt. Milton's	Seeks others opinions	2
021		Maintains high visibility both on and off the job	1
021		Collects and accurately interprets information	4
021		Puts in extra hours to get work done on time	3
021	Lt. Marsh's	Lends a hand when a coworker needs it	4

Profile #	Name	Behaviors	Scores
022		Provides appropriate feedback to subordinates	4
022		Prioritizes work tasks efficiently	4
022		Overcomes hardships	3
022	Lt. Lyon's	Offers to help others do their work	2
023		Monitors the status of work in progress	3
023		Communicates task information effectively	4
023		Ensures work is done right	4
023	Lt. Schmidt's	Talks to others before taking actions that affect them	4
024		Works to create an effective unit atmosphere	3
024		Performs routine tasks efficiently	2
024		Performs consistently and reliably	4
024	Lt. McKeon's	Acts warm and sociable	1
025		Avoids trespassing in others' areas of responsibility	2
025		Accomplishes job tasks expertly	3
025		Shows respect for authority	4
025	Lt. Fuller's	Acts courteously	4
026		Uses good judgment in decision making	5
026		Performs safely	4
026		Ensures work is done right	4
026	Lt. Griffin's	Helps someone without being asked	2
027		Works to create an effective unit atmosphere	3
027		Performs safely	4
027		Strives to excel	3
027	Lt. Long's	Acts warm and sociable	1
028		Takes a position on controversial issues	3
028		Solves technical problems expertly	2
028		Works hard	3
028	Lt. Larson's	Offers to help others do their work	2
029		Represents the group effectively	3
029		Accomplishes job tasks expertly	3
029		Maintains a professional appearance	4
029	Lt. Haynes's	Supports and encourages coworkers	2
030		Speaks effectively	4
030		Communicates task information effectively	4
030		Puts in extra hours to get work done on time	3
030	Lt. Grey's	Offers friendly advice	2
031		Monitors the status of work in progress	3
031		Troubleshoots expertly	2
031		Overcomes hardships	3
031	Lt. Wheeler's	Gets along with others	4
032		Resolves conflicts between members of the unit	3
032		Writes clearly and concisely	3
032		Renders proper military courtesy	4
032	Lt. Jordan's	Acts warm and sociable	1

Profile #	Name	Behaviors	Scores
033		Uses good judgment in decision making	5
033		Performs specialized tasks skillfully	2
033		Overcomes hardships	3
033	Lt. White's	Talks to others before taking actions that affect them	4
034		Takes a position on controversial issues	3
034		Solves technical problems expertly	2
034		Defends the supervisors' decisions	3
034	Lt. Ziska's	Lends a hand when a coworker needs it	4
035		Guides and directs subordinates effectively	4
035		Troubleshoots expertly	2
035		Follows the supervisor's instructions	4
035	Lt. Todd's	Considers others needs before acting	3
036		Monitors the status of work in progress	3
036		Solves technical problems expertly	2
036		Avoids shortcuts when work is overdue	2
036	Lt. Shield's	Displays concern for others	3
037		Avoids trespassing in others' areas of responsibility	2
037		Performs specialized tasks skillfully	2
037		Follows the supervisor's instructions	4
037	Lt. Simmon's	Offers friendly advice	2
038		Works to create an effective unit atmosphere	3
038		Performs routine tasks efficiently	2
038		Puts in extra hours to get work done on time	3
038	Lt. Simpson's	Praises coworkers when they are successful	4
039		Assigns duties appropriate for subordinate's abilities	3
039		Accomplishes job tasks expertly	3
039		Volunteers for a difficult assignment	2
039	Lt. Thompson's	Encourages workers to stick together in hard times	3
040		Takes a position on controversial issues	3
040		Writes clearly and concisely	3
040		Defends the supervisors' decisions	3
040	Lt. Robinson's	Helps someone without being asked	2
041		Communicates task information effectively	4
041		Writes clearly and concisely	3
041		Puts extra effort into a task	3
041	Lt. Vanberg's	Says things to make people feel good about themselves	3
042		Behaves consistently with subordinates	4
042		Performs routine tasks efficiently	2
042		Volunteers for a difficult assignment	2
042	Lt. Sullivan's	Avoids arguments	1
043		Works to create an effective unit atmosphere	3
043		Performs specialized tasks skillfully	2
043		Works hard	3
043	Lt. Stamper's	Voluntarily pitches in to help the group	3

Profile #	Name	Behaviors	Scores
044		Coordinates subordinates' efforts to minimize conflict	3
044		Writes clearly and concisely	3
044		Puts extra effort into a task	3
044	Lt. Watson's	Acts warm and sociable	1
045		Monitors the status of work in progress	3
045		Collects and accurately interprets information	4
045		Defends the supervisors' decisions	3
045	Lt. Gilbert's	Cooperates with others in the team effectively	4
046		Avoids trespassing in others' areas of responsibility	2
046		Communicates task information effectively	4
046		Overcomes hardships	3
046	Lt. McDonald's	Acts courteously	4
047		Uses good judgment in decision making	5
047		Uses technical material effectively	3
047		Shows respect for authority	4
047	Lt. Pinney's	Talks to others before taking actions that affect them	4
048		Guides and directs subordinates effectively	4
048		Troubleshoots expertly	2
048		Volunteers for additional duties	1
048	Lt. Schaeffer's	Says things to make people feel good about themselves	3
049		Represents the group effectively	3
049		Prioritizes work tasks efficiently	4
049		Overcomes hardships	3
049	Lt. Lange's	Encourages workers to stick together in hard times	3
050		Behaves consistently with subordinates	4
050		Solves technical problems expertly	2
050		Performs consistently and reliably	4
050	Lt. Jackson's	Offers to help others do their work	2

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